

ABSTRACT OF THE DISCLOSURE  
**SYSTEMS AND METHODS FOR GEOPHYSICAL IMAGING USING  
AMORPHOUS COMPUTATIONAL PROCESSING**

5   **[0095]**   Various systems and methods of the present invention provide amorphous  
computing systems and methods for use thereof. In some cases, the amorphous computing  
systems include one or more amorphous hardware elements that are programmed under  
control of a computer processor such as, for example, an AMD™ or INTEL™ based personal  
computer. Portions of an algorithm can then be computed by the individual amorphous  
10   hardware elements that can be, as one example, an FPGA or some subset of hardware gates  
available on an FPGA. Methods can include a variety of computations including Wave  
Equations and Kirchhoff algorithms. Thus, in particular cases, the amorphous computing  
systems and methods for using such are applied to seismic imaging problems, as well as other  
problems.

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